DOCUMENT RESUME

ED 221 692 CE 033 767

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TITLE Vocational Teacher Work-Related Experiences Impact Project. Final Report, 1981-1982.
INSTITUTION Educational Improvement Center of Northwest New Jersey, Morris Plains.
SPONS AGENCY New Jersey State Dept. of Education, Trenton. Div. of Vocational Education and Career Preparation.
PUB DATE 82
NOTE 42p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Employment Experience; Experiential Learning; Instructional Improvement; *Part Time Employment; School Business Relationship; Secondary Education; *Teacher Attitudes; *Teacher Effectiveness; Teaching Skills; *Transfer of Training; *Vocational Education Teachers; Work Attitudes; *Work Experience

ABSTRACT

A project was conducted to investigate the following: (1) the degree to which vocational teachers acquire new knowledge, skills, or attitudes from part-time outside work experience; (2) the degree to which vocational teachers transfer newly acquired knowledge, skills, or attitudes to the school and classroom; and (3) the impact of this experience on teaching and learning resulting from the acquisition and transfer of knowledge, skills, or attitudes to the classroom. Fifty-one randomly selected vocational teachers holding part-time jobs in business or industry related to their area of instruction participated in the study. A structured interview was devised to determine the advantages derived from holding a part-time position in business or industry. Upon analysis of the data gathered, it was determined that there were tremendous advantages to the students. Teachers brought back to the classroom greater skills, a better understanding of the latest developments in their field, and revised teaching methods to deal with the technological advances. (Author/KC)

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SEMG 242

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FINAL REPORT

OF THE

VOCATIONAL TEACHER WORK-RELATED EXPERIENCES IMPACT PROJECT

1981-1982

EDUCATIONAL IMPROVEMENT CENTER - NORTHWEST
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IDENTIFICATION NO. _____ AMOUNT FUNDED _____

FUNDED UNDER SECTION _____ OF P. L. 94-482

PROJECT TITLE: _____

LEGAL NAME OF APPLICANT DISTRICT, INSTITUTION OR AGENCY: Educational Improvement Center - Northwest

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ABSTRACT

DESCRIPTION OF PROJECT

The study investigated:

1. the degree to which vocational teachers acquire new knowledge, skills, or attitudes from part-time outside work experience.

2. the degree to which vocational teachers transfer newly acquired knowledge, skills, or attitudes to the school and classroom.

3. the impact of this experience on teaching and learning due to the acquisition and transfer of knowledge, skills, or attitudes to the classroom.

Fifty-one randomly selected vocational teachers holding part-time jobs in business or industry related to their area of instruction participated in this study. A structured interview was devised to determine the advantages derived from holding a part-time position in business or industry.

Upon analysis of the data accrued, it was determined that there were tremendous advantages to the students. Teachers brought back to the classroom greater skills, a better understanding of the latest developments in their field, and revised teaching methods to deal with the technological advances.

This project reported herein was conducted pursuant to the contract from the New Jersey Department of Education, Division of Vocational Education and Career Preparation. It was funded under Section 132 of Public Law 94-482.

Project Duration:

July 1, 1981
Beginning Date

June 30, 1982
Ending Date

The Contractors undertaking this project were encouraged to express fully their judgments in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official funding agency positions or policies.

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ACKNOWLEDGEMENTS

We would like to thank the vocational teachers and their school administrators for the cooperation given us in our pursuit of a greater understanding of the needs in the field of vocational education. Through their cooperation, it is hoped education of our youth will be improved.

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A. INTRODUCTION

1. PROBLEM

The accelerating pace of technological advances affects students and adults alike - the ubiquity of the calculator, automatic long distance dialing, computerization of the office and the factory are some examples. Technologies are expanding so quickly that it is almost impossible to predict which careers are going to be important or even in existence in the near future. How then can we prepare our children to make a living in this changing world? This creates a specific problem for vocational-technical schools, which are charged with this reponsibility. Generally speaking, vocational teachers are unable to keep pace with the new technologies, processes and practices that are currently being adopted by businesses. This tends to result in the training of students in outdated and obsolete methods or in failure to provide training in the latest advances that are becoming commonplace in the factory, the workshop, and the office.

Job obsolescence and changing technology are bringing about the "modular man" in the "adhocracy" society, according to Alvin Toffler. People in the future world of work will need to be flexible and will need to possess a variety of skills which are interchangeable and transferable to a variety of tasks. The vocational-technical education which students receive today will determine their success in the future.

Because teachers generally have a limited understanding of the realities of economics and business, an increasingly inaccurate and possibly negative attitude toward industry may be fostered and transmitted to a generation of young people.

One way in which vocational teachers can overcome the gap that exists between technology and the classroom may be through part-time employment outside

the school in vocational work. Many vocational teachers perform "real world" jobs on a part-time basis after school, over the weekends, or during the summer. This outside work often brings the vocational teacher in direct contact with the latest techniques, methodologies and equipment. It also gives vocational teachers an opportunity to sharpen skills in real work situations. Attitudes as well as specific skills can be sharpened.

The Vocational Teacher Work-Related Experiences Impact Project addressed the issue of transference of new skills and attitudes from the work setting to the school setting. Specifically, the study asked:

1. To what degree do vocational teachers acquire new knowledge, skills, or attitudes from part-time outside work experiences?
2. To what degree do vocational teachers transfer newly acquired knowledge, skills, or attitudes to the school and classroom setting?
3. What impact on teaching and learning can be demonstrated due to the acquisition and transfer of knowledge, skills, or attitudes to the classroom?

2. OBJECTIVES

The objectives of this study were:

1. To identify vocatonal teachers who have taken part-time employment in jobs related to the content area they teach.
2. To solicit and select a minimum of fifty teachers to participate in the study.
3. To design an interview/impact instrument.
4. To interview a minimum of fifty teachers to determine the acquisition, transfer, and impact of part-time outside jobs on classroom teaching and/or student learning.

5. To develop and obtain impact data from the vocational teachers.

6. To collect the impact data and to analyze the data.

7. To write the final report summarizing the interview and impact data.

B. BODY OF REPORT

1. PROCEDURE

General Design

This study made use of a structured interview. In the stuctured interview approach, each participating teacher was asked a series of specific questions designed to elicit the nature of their part-time work, the areas of possible skill development, the areas of tranfer to the classroom, and the specific objectives that were transferred.

Population Sample

The target population consisted of vocational education teachers within the Northwestern region of New Jersey. A random sample of these teachers was selected from which fifty-one were identified as holding part-time positions in an area related to their primary area of instruction in the school. These teachers consented to participate in the study.

Instrument

The survey form was composed of twenty-three questions concerning the value of working an outside part-time job similar to that which the respondents teach during the school day (See Appendix A.). The form was developed in cooperation with the New Jersey State Department of Education, Division of Vocational Education and vocational teachers in the field. The questions addressed working part-time as follows:

1. Familiarity with new equipment and methodology.

2. Developing contacts to use guest speakers.

3. Developing contacts to help students find jobs.

4. Direct benefits to teachers.

5. Direct benefits to students.

6. New minimum skills essential for job entry.

7. Skills, attitudes and values needed for success in vocational positions.

Analysis

After gathering the data, a tally sheet was constructed to summarize the information. Similar answers were grouped under a single statement. The number of the responses for each statement was then calculated and recorded.

Findings

Table I provides a summary of responses to the survey.

TABLE I

VOCATIONAL TEACHER WORK-RELATED EXPERIENCES IMPACT PROJECT

1. What contacts are made in relation to equipment in shop and industry?

a) Wholesalers/sales people	8
b) Very few contacts are made	6
c) None	5
d) Contacts made where I work	5
e) By means of jobbers in the immediate area equipment manuals. Updating equipment	4
f) Talk to private shop managers and operators	3
g) Outside work	2
h) Trade shows	2
i) Don't understand	2
j) Job contacts that can go in the classroom	2
k) Barber & beauty suppliers and hair shows	2
l) Observation on equipment as we use it	2
m) Make any contacts and buy equipment accordingly	2
n) Workshops	1
o) Equipment is surveyed at conventions to find out if any can be used in the shop	1
p) Demonstration contacts	1
q) Bid lists and specific programs	1

2. How does the teacher update equipment? Is it in relation to work experience or contacts - curriculum/tests hands-on?

a) Both are essential	29
b) No update needed	3
c) Other	19

3. Does the teacher call in guest speakers because of contacts made?

a) Yes - very helpful	26
b) No	18
c) Occasionnally	7

4. Has work related experience changed the role with the advisory committee as to input in improving direction and/or committee members?

a) Yes	25
b) No	10
c) Other	16

5. **How and what did the teacher bring back into the classroom and is it theory, practical hands-on experience, or both?**

a) Both	31
b) Practical hands-on experience	13
c) Own experiences	3
d) Theory	3

6. **Is it beneficial to have a part-time job? Why?**

a) Yes, updating skills	23
b) No	4
c) Other	24

7. **Example of direct benefit from part-time job while students are still in classroom, also can teacher, because of contacts, recommend students for job upon graduation?**

a) Students received direct benefits	41
b) Students did not receive direct benefits	10

8. **What are the benefits from donation of equipment from industry because of contacts?**

a) None	17
b) Most useful	7
c) Never had equipment donated	7

9. **Are there benefits to students for part-time work related to teachers part-time work?**

a) Yes	32
b) No	12
c) Sometimes	7

10. **How many and who are teaching night school - benefits in terms of new knowledge/contacts, etc. which carry over into daytime?**

a) Non applicable	9
b) None	5
c) I used to teach night school, gained some experience	3
d) Only 2 teachers - teach night school because they need the money	2
e) Teaching night and day	2
f) Three teachers teach night school	2
g) No one in my field	2
h) I don't know	2
i) One mason - contacts more than new knowledge, teaching in sharing situation	1
j) Three teachers - night school, 2 have made contacts with company	1
k) I taught night school but I don't think it helped	1

m) Limited benefits 1
n) I teach nights, helps kids too 1
o) Definite carryover 1
p) One other teacher 1
q) I don't teach nights 1
r) Mostly night school teachers are not qualified to teach day school 1
s) Poor question - you should do the research 1
t) Gains more insight on local industries through adult students 1
u) Contacts through nights by working evenings 1
v) One teacher - teaches night school presently another teacher taught night school for 19 years, and gave it up so he could devote more time to day. No daytime benefits seen 1
w) One teacher in the Vocational Department teaches an adult class in auto mechanics on Saturday - great for public relations 1
x) Three in my department 1

11. How has your methodology changed since/or due to your working outside?

a) Always changing 41
b) No change 10

12. How has your attitude changed toward Business/Industry? How did you bring that to students?

a) Changed 35
b) No change 16

13. What difficulties (if any) did you encounter in trying to implement knowledge or technology learned from other job within your school?

a) None 27
b) Lack of up-to-date equipment 9
c) Other 15

14. Have you considered leaving teaching because of acquired knowledge of the work experience?

a) Yes 18
b) No 7
c) Sometimes 26

15. How do you feel about teaching your skills, after knowing what trade is like on the outside? Do you make students aware of (+) and (-), How?

a) Good, make students more aware of outside world	20
b) By pointing out the specific areas that are positive and negative (from experience)	20
c) I tell students a job can be boring, be creative and enjoy work like I do	3
d) I tell students they are "crazy" to want to be a cook. They go into business anyway	1
e) I feel good about my trade	1
f) This is why I'm here	1
g) I question my students about their jobs and encourage them to relate experiences to other students	1
h) By passing on my experience	1
i) Discussion on work lessons	1
j) Good, students are groomed by varied tasks designed with poor math in mind	1

16. What impact has technology had on your field?

a) Large impact	44
b) Some impact	6
c) No impact	1

17. Does the additional technology you've learned have an impact at the entry level of the job?

a) Yes	33
b) No	13
c) Rarely	5

18. Does the school provide you with the equipment to demonstrate the latest methods or technology?

a) Yes	34
b) Sometimes	10
c) No	13
d) No new methods	2

19. Do you work in the same place all the time, do the same thing or is it varied?

a) Varied	23
b) Work in same place, work varies	17
c) Work in same place, teach same thing	10

20. Do you work the part-time job for just money or for upgrading skill, enjoyment?

a) All of the above	38
b) No don't work part-time	6
c) Mainly money	3
d) Work for my own benefit, not money	2

21. What behavior do you observe in fellow workers that you would describe as characteristic for success?

a) Hard working, prompt, knowledgeable in trade, enjoyment of work, organization, good attitude, motivation	42
b) I work alone all summer	1
c) Money and living the good life	1
d) Varies on individual	1
e) Good safety practices	1
f) In education you must have program that keeps the student challenged with projects that require thinking	1

22. What skills, attitudes and values would you tell your students are important for this occupation?

a) Positive attitude, honesty, getting along with others, being accurate, full knowledge of your trade	46
b) The skills and attitude related to your job	1
c) Present self in adult manner	1
d) Enjoyment of work	1

23. Of the people who hold their jobs and/or advance - what special abilities or characteristics do they have?

a) Hard worker, good attitude, interested, dedication, good skills, knowledgeable	38
b) What they know, and who they know (political)	4
c) Education	2
d) Desire to earn more money	1
e) Desire to succeed - willing to take a chance	1
f) Not applicable	1
g) Determination	1

3. INTERPRETATION OF FINDINGS

Each question will be addressed separately with a brief comment regarding the responses listed in Table I.

Question #1: What contacts are made in relation to equipment in shop and industry?

Answer: There was a large diversity of responses to this question. It seems the teachers use a considerable number of contacts to familiarize themselves with the latest equipment available in the field. This procedure would seem critical since there is no single centralized distributor for all the latest equipment in all the vocational disciplines. Most of the corporations involved in developing equipment for trades tend to specialize either because of interest or financial constraints, thus, creating the need for a diversified approach.

Some of the specific contacts mentioned were wholesalers, sales representatives, shop managers, suppliers, workshops, and trade shows.

Question #2: How does the teacher update equipment? Is it in relation to work experiences or contacts - curriculum/test/hands-on?

Answer: The overwhelming response to this question was that both work experiences and contacts play a part in the acquisition of knowledge relating to the latest developments in equipment. Fifty-seven percent of the responses indicated both were essential. Fourteen percent did indicate that they referred to catalogs and/or professional magazines for additional information. Among the other sources mentioned were films, visitations, and guest speakers. It would be advantageous for more teachers to turn to such resources.

Question #3: Does the teacher call in guest speakers because of contacts made?

Answer: Fifty-one percent of the teachers indicated that they do utilize guest speakers as a result of contacts made through their part-time experience. For the most part, they find this procedure to work well for them. Thirty-five percent stated that they do not take advantage of the contacts made, while the rest make occasional use of the contacts.

Question #4: Has work related experiences changed your role with the advisory committee or improved the direction and/or membership of the committee?

Answer: In slightly over fifty percent of the cases, teachers stated that their input to the advisory committee resulting from experiences in part-time jobs improved committee direction. This is a particularly significant statistic because the advisory committee frequently has either the overt or covert power to affect change. Insights gained through a continued contact with the field, and fed to an advisory committee, will assist the schools in keeping abreast of the needs of the outside world. It is a shame that over twenty percent of the responsents did not report taking advantage of advisory committees.

Question #5: How and what did the teacher bring back into the classroom and is it theory, practical hands-on experience, or both?

Answer: Sixty-one percent of the teachers indicated that both theory and practical hands-on experiences were brought back into the classroom as a result of the part-time job. Another twenty-six percent did say that they brought hands-on experiences back to the classroom. It is suspected that in these instances, the underlying theory did not change considerably, but there may have been technical advances made within the discipline.

Question #6: Is it beneficial to have a part-time job? Why?

Answer: To this question, only eight percent of the teachers concluded that it was not beneficial to the school, students, and/or teacher to be involved in a part-time job related to their area of expertise. The list of benefits was varied, however, forty-five percent of the teachers listed the updating of skills to be of prime benefit.

Question #7: Example of a direct benefit from part-time job while student is still in classroom. Can the teacher, because of contacts, recommend students for jobs upon graduation?

Answer: Eighty percent of the respondents believed that there were direct benefits for students who themselves become involved in part-time positions related to their projected trade. Only one person indicated that such experiences were not beneficial. There was no clarification given on this comment. The suggestion that guidance counselors, not teachers, be responsible for constructing such programs in cooperation with employers has merit. The only concern might be that with too many guidance counselors seem to have an orientation toward counseling college bound students. It might be necessary to develop strategies for familiarize guidance counselors with the world of trades.

Question #8: What are the benefits from the donation of equipment from industry because of contacts made on the part-time jobs of the teachers?

Answer: In almost every instance, teachers did not receive donations in the form of equipment from industry as a result of their part-time positions. Of those who did receive equipment, most indicated that the equipment was very useful. A few noted that the equipment they received was rarely in good condition. Some teachers also noted that some difficulty was encountered with

the board of education on the acquisition of equipment from this source.

Question #9: Are there benefits to students for part-time work related to the teachers' part-time work?

Answer: Sixty-three percent of the teachers indicated that they believed students derived benefits from being exposed to teachers who worked part-time jobs related to the teacher's regular school position. The teachers, however, did not go into detail as to what these benefits were. Twenty-four percent felt there was no relationship. The others had no opinion. The specific idea of a co-op work experience program was mentioned as being beneficial.

Question #10: If you were working in night school, what benefits in terms of knowledge/contacts, etc. carry over into the daytime position?

Answer: Only one teacher noted the advantage of developing contacts through teaching nights. It was noted, however, that insights were obtained in reference to the needs in local industries through contacts with adult students taught in the evening. Another respondent thought the course on auto mechanics served as a good vehicle for developing more positive public relations. Overwhelmingly, however, the respondents felt there were no added contacts as a result of teaching night school.

Question #11: How has your methodology changed since/or due to your working outside?

Answer: Of the teachers surveyed, twenty percent felt there was no change in their methodology as a result of their part-time job. The others (80%) all indicated a positive change. Some felt their actual skill level was increased while others believed they were affected through the acquisition of new procedures for teaching the students. In no instance did the teachers elaborate enough to make clear any specific procedures.

Question #12: How has your attitude changed towards business and industry, and how did you bring that to your students?

Answer: Thirty-one percent of the teachers indicated no change in their attitude, however, the rest believed their attitudes changed dramatically toward the positive. Some of the teachers actively pursued discussions with students to make them more aware of what it is like to work in industry. One individual expressed concern that industry has not taken a more active interest in the education of prospective employees and suggested that something be done to correct this. The indication was that he was beginning to do this in his own part-time work situation.

Question #13: What difficulties, if any, did you encounter in trying to implement knowledge or technology learned from the other job within your school?

Answer: No difficulty in implementing knowledge or technology learned from the part-time job was found among fifty-three percent of the respondents. In eighteen percent of the responses, concern was expressed regarding out-of-date equipment in the schools. With newly acquired skills little could be accomplished without equipment. Two teachers noted difficulties with convincing school administrators of the needs, and one commented that "school grade" equipment was inferior. Such equipment limits the extent to which the teacher could instruct newly acquired technological skills.

Question #14: Have you considered leaving teaching because of acquired knowledge of the work experience, and why?

Answer: Thirty-five percent of the teachers responded positively to this question, fourteen percent because of better pay or other benefits. The other respondents mentioned the joy derived from educating students. One teacher noted

that he has now left teaching twice in order to get full-time job experience in the "real world". He believed these "real world" experiences were extremely valuable for updating his skills and understanding the latest advances in the field.

Question #15: How do you feel about teaching your skill, trade or subject to students, after knowing what trade is like on the outside? Do you make students aware of positives and/or negatives? How do you do it?

Answer: All of the teachers felt better about teaching the skills after working in the field. Through in-depth discussions on the world of work, students were made more aware of the repsonsibilities they will have to accept should they elect to pursue a trade. One teacher indicated a deeper pride in the trade as a result of being involved in the part-time job, and this carried over into the classroom through his behavior.

Question #16: What impact has technology has on your field?

Answer: Only one respondent indicated there was no impact on his field from technological advances. Twelve percent stated there were some changes, but all the rest mentioned that there was a large impact in their fields. With regard to the automobile industry, it was noted that technology has become so sophisticated that it has become almost impossible to service an automobile. A much greater understanding of the theory, and a much stronger academic preparation are now required to enter this vocational area. Students are constantly being introduced new materials and innovative ways to use those materials. Even though only minor changes have been made in the area of quality food marketing, as an example, the fast food market has grown astronomically and has placed many new demands upon the teacher and the curriculum. Deep concerns

on the part of the respondents were felt in that something must be done immediately to reduce the ever growing gap between the school and industry. School equipment must be updated and teachers must be offered programs to expose them to the latest technological advances.

Question #17: Does the additional technology you've learned have an impact at the entry level of the job?

Answer: Twenty-five percent of the teachers believed that additional technological knowledge would not have an impact at the entry level of a job,, and only four percent felt it rarely made a difference. The remaining teachers (71%) all expressed the need for students to have greater technological background at the entry level of the job. Fifty-seven percent stated that the more one knows in technology the better the chances to obtain a job. An understanding of computers is rapidly becoming a prerequisite, and students should be encouraged to obtain as much education as possible in this area.

Question #18: Does the school provide you with the equipment to demonstrate the latest methods or technology?

Answer: Of the teachers responding, twenty-six percent indicated that the school does not provide the equipment necessary to demonstrate the latest methods or technology. The cost factor seems to be prohibitive in many cases. Sixty-seven percent stated that, within limits, the school is providing the necessary equipment. An on-going assessment of the needs seems essential in order to keep updating the equipment. A few teachers noted that there were no new methods in their areas, thus, there was no need for the school to obtain any new equipment.

Question #19: Do you work in the same place all the time, doing the same thing or is it varied?

Answer: Of the fifty-one teachers involved in the study, forty-five percent mentioned they varied their jobs with regard to either place or task. One third worked in the same place, but their responsibilities varied. Finally, twenty percent worked in the same place doing the same thing. The advantage to varying the place of employment is that the teacher becomes familiar with different equipment. The advantage of varying the task would be to broaden ones area of expertise.

Question #20: Do you work at your part-time job for just money or for upgrading skills, enjoyment, etc.?

Answer: An overwhelming seventy-five percent responded that all the above entered into the situation. They felt that the extra money, the change to upgrade their skills and the enjoyment of the job contributed to their desire to work in a part-time position. Six percent did it mainly for money, and four percent for some undefined intrinsic benefit. Twelve percent noted that they were not presently employed part-time. These teachers were included in the study because they had worked in positions during the previous summer and were basing their responses on those experiences.

Question #21: What behavior do you observe in fellow workers that you would describe as characteristics for success?

Answer: In the study entitled The Occupational Projection Research Project, completed in 1981 by Goldberg and Loos*, the skills, attitudes and values selected as most important by leaders in business and industry in the six county

*Melvin Goldberg and Peter Loos. Occupational Projection Research Project, New Jersey Department of Education, Office of Vocational Eduction, 1971

1. Understanding and following oral and written instructions
2. Exhibits positive work attitude
3. Cooperates with fellow workers
4. Exhibits pride in workmanship
5. Operating tools and equipment relevant to the job
6. Demonstrates initiative on the job
7. Communicating effectively with clients and fellow workers
8. Adapting and adjusting to change, is flexible
9. Values checking own work for thoroughness and accuracy
10. Works independently when necessary

The responses to this question by the fifty-one teachers closely parallel the skills, attitudes and values selected as most important by leaders in business and industry. The respondents listed such qualities as hard working, prompt, knowledgeable in the trade, enjoy work, are organized, good attitude, and motivated.

Question #22: What skills, attitudes and values would you tell your students are important for this occupation?

Answer: There was unanimity of agreement that the teachers would tell their students the most important skills, attitudes and values included: a positive attitude, honesty, the ability to get along with others, accuracy, and a full knowledge of the trade. One teacher did mention the necessity to present oneself in an adult manner.

Question #23: Of the people who hold their jobs and/or advance, what special abilities or characteristics do they have?

Answer: Seventy-five percent of the teachers surveyed believed hard work, a good attitude, dedication, good skills, and being knowledgeable as special

abilities students should possess in order to hold a job or advance. Some teachers did indicate that sometimes people hold their jobs or advance because of "who they know", thus, inferring it might be political. Education was another factor mentioned in relationship to advancement. Determination, a desire to succeed also plays a part in whether one holds a job or advances. These special characteristics tend to be a part of one's personality and may be difficult to instill within an individual through education.

C. CONCLUSION

The Vocational Teacher Work-Related Experience Impact Project addressed the issue of the transference of new skills and attitudes by vocational teachers from their part-time work setting to the school settting. Specifically, the study asked:

1. To what degree do vocational teachers acquire new knowledge, skills, or attitudes from part-time outside work experience?
2. To what degree do vocational teachers transfer newly acquired knowledge, skills, or attitudes to the school and classroom setting?
3. What impact on teaching and learning can be demonstrated due to the acquisition and transfer of knowledge, skills, or attitudes to the classroom?

From the responses of the participants in the study, there seems to be a strong indication that vocational teachers holding part-time positions in the fields related to their instructional abilities benefit greatly from their re-elated work experiences. Knowledge of the latest developments in the field are acquired as well as new skills essential for success in our ever growing technological world. Through the structured interview technique, it was disclosed that almost without exception, teachers believed they were able to transfer their newly acquired knowledge, skill or attitude to the school situation. For the most port this was accomplished through demonstration, instruction, and/or discussion. The comments of the teachers participating in the study indicate there has been a definite impact on their methods in the classroom as a result of experiences in their part-time position.

D. RECOMMENDATIONS

1. Vocational teachers should be encouraged to seek part-time employment in business or industry which relates to their area of instruction. An incentive program might be considered. One possibility could be the establishment of funds to structure a cooperative program between educators and business/ industrial leaders to place teachers into the field on a regular basis. Vocational teachers should also be encouraged to take sabatical leaves to offer them the opportunity to work on a full-time basis for a period of time. This would give the teacher a concentrated exposure to the latest developments in the field.

2. A committee of vocational educators should be constructed specifically to monitor development in the various fields and communicate their findings periodically to the educational leaders in the profession. It is particularly important to recognize major breakthroughs and obtain updated equipment with which the teachers could instruct the newest techniques.

3. The existing curriculum should be examined to discover necessary revisions to update instruction in the classroom to better prepare the students in vocational programs.

APPENDIX A

VOCATIONAL TEACHER WORK-RELATED EXPERIENCES IMPACT PROJECT

1. What contacts are made in relation to equipment in shop and industry?

2. How does the teacher update equipment? Is it in relation to work experiences or contacts - Curriculum/Test/Hands-On?

3. Does the teacher call in guest speakers because of contacts made?

4. Has work related experiences changed the role with the advisory committee as to input in improving the direction and/or members of the committee?

5. How and what did the teacher bring back into the classroom and is it theory, practical hands-on experience, or both?

6. Is it beneficial to have a part-time job? Why?

7. Example of a direct benefit from part-time job - while student is still in classroom, also can teacher, because of contacts, recommend students for job upon graduation?

8. What are the benefits from donation of equipment from Industry because of contacts?

9. Are there benefits to students for part-time work - related to teachers' part-time work?

10. How many and who - are teaching night school - benefits in terms of new knowledge/contacts, etc. which carry over into daytime?

11. How has your methodology changed since/or due to your working outside?

12. How has your attitude changed toward Business and Industry? How did you bring that to students?

13. What difficulties (if any) did you encounter in trying to implement knowledge or technology learned from other job within your school?

14. Have you considered leaving teaching because of acquired knowledge of the work experience - why?

15. How do you feel about teaching your skill, trade or subject to students - after knowing what trade is like on the outside? Do you make students aware of positives or negatives - How?

16. What impact has technology had on your field?

17. Does the additional technology you've learned have an impact at the entry level of the job?

18. Does the school provide you with the equipment to demonstrate the latest methods or technology?

19. Do you work in the same place all the time - do the same thing - or is it varied?

20. Do you work at your part-time job for just money or for up-grading skills/ enjoyment, etc. - or both?

21. What behavior do you observe in fellow workers that you would describe as characteristics for success?

22. What skills, attitudes and values would you tell your students are important for this occupation?

23. Of the people who hold their jobs and/or advance - what special abilities or characteristics do they have?